AMENDMENTS TO THE SPECIFICATION:

Page 1, immediately preceding the paragraph commencing "The present invention relates..." insert the following heading and sub-heading:

BACKGROUND

1. Technical Field

Page 1, immediately preceding the paragraph commencing "It is known to encrypt data..." insert the following sub-heading:

2. Related Art

Page 1, immediately preceding the paragraph commencing "According to one aspect..." insert the following heading:

BRIEF SUMMARY

Page 4, immediately preceding the paragraph commencing "Further aspects of the invention..." insert the following heading:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 4, immediately preceding the paragraph commencing "Figure 1 shows a secure communications system..." insert the following heading:

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Pages 4-5, bridging paragraph:

FIG. 1 shows a secure communications system in which a base station 12 can receive data from an outstation 14, over an optical communications link 16 extending between the base station 12 and the outstation 14. The base station 12 includes an optical source 18 with a short coherence time. Wavetrain portions also known as carrier signals (hereinafter referred to as signals) from the optical source 18 are fed to an interferometer stage 20, here a ~~Mach-Zehnder~~ Mach-Zehender interferometer having a first path 24 and a second path 26. The interferometer 20 includes first coupling stage 28 for coupling optical radiation between the optical source 18, the first and second paths 24, 26, and data processing apparatus 29. For light travelling in a forward direction, that is, towards the outstation 14, the first coupling stage 28 acts as a directional power (intensity) splitter, channelling light from the optical source 18 to each of the paths 24, 26, the power to each path being shared in a predetermined manner. In the present example, the first coupling stage acts as a 50:50 power splitter, the power input to each path being equal. Consequently, for each signal provided by the optical source 18 in a given time interval, that signal is copied such that there is a first copy and a second copy, the first and second copies being duplicates of one another. One copy travels along the first path 24 whilst the other copy travels along the second path 26. A

second coupling stage 30 is provided for coupling light between the first and second paths 24, 26 and an output 35 of the interferometer, which output is connected to the transmission link 16. For light travelling in the forward direction, the coupling stage 30 acts as a combiner, combining the light from the first and second paths and channelling this combined light to the interferometer output 35. The first path of the interferometer has a delay stage 34 for increasing the transit time of light travelling therealong between the first and second coupling stages 28, 30, such that the transit time for light travelling between the coupling stages 28, 30 is higher along the first path 24 than it is along the second path 26. For each signal produced by the optical source, the interferometer 20 serves to delay one of the signal copies relative to the other signal copy, the signal copies being transmitted onto the link 16 at different times relative to one another.

Page 6, paragraph commencing at line 12:

The first and second retarded signals S1, S2 which are retarded in one direction only will be returned to the first coupler stage 28 at the same time. In the absence of any modulation at the outstation 14, these signals are copies of one another and the signals will interfere or otherwise combine constructively at the first coupler stage 28. However, if one of the signals is modulated with data, in particular if one of the pair of signals S1, S2 is ~~phased~~ phase modulated with data, the interference between the two signals will result in a signal which is representative of the modulating data.